

Applicant(s) : Shigeyuki Nozaki
Serial No. : 10/564,052
Filed : January 9, 2006
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Attorney Docket No.: 60004-110US1

REMARKS

This document is submitted in reply to the Office Action dated November 7, 2007 ("Office Action").

Applicants have amended claim 1 by incorporating the limitations of claim 2 into it to more particularly point out and distinctly claim the subject matter which they regard as their invention. The amendment of claim 1 has necessitated the cancellation of claims 2, 13-14, 16-17, 20-21, and 23. Applicants have also amended claim 9 to correct a typographical error. Upon entry of the amendment, claims 1, 3-12, 15, 18-19, and 22 will be pending and under examination. No new matter has been added.

Applicants respectfully request that the Examiner reconsider this application, as amended, in view of the following remarks.

The Examiner rejects claims 1-23 for obviousness on two grounds, which are addressed respectively below:

I

Claims 1-8 and 13-23 are rejected as obvious over Harada et al., U.S. Patent No. 6,107,358 ("Harada"), in view of Chmelir, U.S. Patent No. 5,985,370 ("Chmelir").

Applicants have cancelled claims 2, 13-14, 16-17, 20-21, and 23. Independent claim 1 will be discussed first.

Claim 1 is directed to a method for obtaining a water-soluble porous polymer having a water-insoluble content of not more than 10 weight %.

Harada, the primary reference, discloses a method for obtaining a porous polymer capable of fast water absorption. See the Abstract. This reference further discloses that the porous polymer thus obtained has a high water-insoluble content. See Examples 1-33. As pointed out by the Examiner, "Harada et al. do not teach the water-insoluble content to be less than or equal to 10 % weight." See the Office Action, page 2, lines 15 and 16. Indeed, nowhere in this reference is it disclosed or suggested obtaining a water-soluble porous polymer having a water-insoluble content of not more than 10 weight % as required by claim 1.

Chmelir, the secondary reference, discloses a method for obtaining a porous polymer that has a high water absorption capacity. See the Abstract. As discussed above, Harada, the primary reference, does not disclose or suggest obtaining a water-soluble porous polymer with a water-insoluble content of not more than 10 weight %, as required by claim 1. Relying on Chmelir to cure the deficiency of Harada, the Examiner asserts that, “Chmelir [] teaches … [that] the polymer formed is 0-20 % weight monomers that are partially soluble or insoluble in water.” See the Office Action, page 2, lines 14-16; emphasis added. In other words, it is the Examiner’s position that Chmelir describes a porous polymer having “a water-insoluble content of not more than 10 weight %,” a limitation of claim 1. Applicants disagree.

The porous polymer described in Chmelir is prepared via the polymerization of two types of monomers, monomers of the first type are 0-20 weight % water-insoluble and monomers of the second type are 80-100 weight % water-soluble. See column 4, lines 7-29. The Examiner failed to understand that “0-20 % weight monomers that are partially soluble or insoluble in water” refers to the monomers of the second type (a starting material), not the water-insoluble content of the porous polymer, the final product. She clearly erred in relying on “0-20 % weight” monomers to support her position that Chmelir teaches a final product having a water-insoluble content of “not more than 10 weight %.” This reference actually discloses a porous polymer having a water-insoluble content of 100 weight % or nearly 100 weight %, not less than 10 weight %. Indeed, the porous polymer absorbs liquids, e.g. water, without dissolution. See column 4, lines 46-48. It goes without saying that a water-absorbing porous polymer that is not dissolved in water must have a water-insoluble content of 100 weight % or nearly 100 weight %. Accordingly, Chmelir, like Harada, also does not disclose or suggest obtaining a water-soluble porous polymer with a water-insoluble content of not more than 10 weight %, as required by claim 1.

In sum, neither Harada nor Chmelir discloses or suggests a water-soluble porous polymer with a water-insoluble content of not more than 10 weight %, as required by

claim 1. Accordingly, their combination does not render claim 1 obvious. Nor does it render obvious claims 3-8, 15, 18-19, and 22, all of which depend from claim 1.

II

Claims 9-12 are rejected as obvious over Harada in view of Chmelir and Suzuki US Patent No. 3,969,562 ("Suzuki").

Claim 9, like claim 1, is directed to a water-soluble porous polymer having a water-insoluble content of not more than 10 weight %.

As discussed above, in reference to claim 1, neither Harada nor Chmelir suggests a water-soluble porous polymer having a water-insoluble content of not more than 10 weight %, a limitation of claim 9.

Suzuki teaches that the porous polymer is impermeable to water. See column 5, line 16. In other words, the porous polymer disclosed in this reference is a water-insoluble polymer, not a water-soluble porous polymer having a water-insoluble content of not more than 10 weight %, as required by claim 9. Accordingly, this reference does not make up for the deficiency of both Harada and Chmelir.

To complete the record, Applicants would like to address the Examiner's reliance on a teaching in Suzuki. The Examiner states that Suzuki "teaches a porous polymer with a void ratio in the range of 5-80 %." See the Office Action, page 8, lines 6 and 7.

Admittedly, the water-soluble porous polymer of claim 9 has a void ratio in the range of 5-80 % based on polymer volume. However, the patentability of claim 9 resides in part in "a water-insoluble content of not more than 10 weight %," not "a void ratio in the range of 5-80 %."

For the reasons set forth above, Applicants submit that Harada, Chmelir, and Suzuki, in combination, do not render claim 9 obvious. Nor do they render obvious claims 10-12, all of which depend from claim 9.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement

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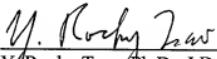
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with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

No fee is believed to be due. Please apply any other charges or credits to Deposit Account No. 50-4189, referencing Attorney Docket No. 60004-110US1.

Respectfully submitted,

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Y. Rocky Tsao, Ph.D., J.D.
Attorney for Applicants
Reg. No. 34,053

Occhiuti Rohlicek & Tsao LLP
10 Fawcett Street
Cambridge, MA 02138
Telephone: (617) 500-2509
Facsimile: (617) 500-2499